AMENDMENTS TO THE CLAIMS

Please replace all prior versions and listings of claims in the application with the following list of claims:

1. (Previously presented) A method for detecting the presence of a granulocyte disorder comprising:

detecting in a biological sample from a subject a level of expression of one or more granulocyte-selective markers selected from the group of Ca2+ channel type A1 D (BE550599), aquaporin 9 (NM_020980), K+ channel Kir 1.3 (U73191), K+ channel Kir 2.1 (AF153820), histamine H4 R (AF312230), PGEc R type 3a2 (X83858), EMR-1 (NM_001974), GPR, Edg-4 (AF011466), PAR1-like GPR43 (NM_005306), GPR77 (NM_018485), GPR86 purinergic R (NM_023914), PAR2 (BE965369), HTm4 (L35848), fibroblast growth factor R 2 (NM_022969), low density lipoprotein R (NM_000527), butyrophilin like R (AK025267), and leukocyte immunoglobulin-like R A2 (NM_006866); and

comparing the level of expression of each of the one or more granulocyte-selective markers with a reference level of expression, wherein a statistically significant difference between the level of expression of at least one granulocyte-selective marker and the reference level of expression for the at least one granulocyte-selective marker is indicative of the presence of a granulocyte disorder in the subject.

2. (Previously presented) The method of claim 1, wherein the reference level of expression for a granulocyte-selective marker is a level of expression of the granulocyte-selective marker in a normal biological sample.

3. (Original) The method of claim 1, wherein the biological sample is a blood sample.

4. (Original) The method of claim 1, wherein the biological sample is a tissue sample.

5. (Original) The method of claim 1, wherein the level of expression of each of the one or more granulocyte-selective markers is determined by determining an amount of an mRNA in the biological sample corresponding to each of the one or more granulocyte-selective markers.

6 (Original) The method of claim 5, wherein the method of determining the amount of mRNA comprises reverse transcription polymerase chain reaction (RT-PCR) amplification.

7.-8. (Canceled)

9. (Previously presented) The method of claim 1, wherein a higher level of expression of at least one of the one or more granulocyte-selective markers in the biological sample compared to the reference level of expression for the at least one granulocyte-selective marker is indicative of the presence of the granulocyte disorder.

10. (Previously presented) The method of claim 1, wherein a lower level of expression of at least one of the one or more granulocyte-selective markers in the biological sample compared to the reference level of expression for the at least one granulocyte-selective marker is indicative of the presence of the granulocyte disorder.

11. (Original) The method of claim 1, wherein the granulocyte disorder comprises an abnormally high number of one or more types of granulocyte in the biological sample.

12. (Original) The method of claim 1, wherein the granulocyte disorder comprises an abnormally low number of one or more types of granulocyte in the biological sample.

13. (Previously presented) The method of claim 1, wherein the granulocyte disorder comprises an abnormal pattern of expression of one or more granulocyte-selective markers in one or more types of granulocyte in the biological sample.

14. (Previously presented) A method for detecting the presence of a non-neutrophil granulocyte disorder or mast cell disorder comprising:

detecting in a biological sample from a subject a level of expression of one or more non-neutrophil granulocyte- or mast cell-selective markers chosen from the group of Ca2+ channel type A1 D (BE550599), histamine H4 R (AF312230), PGEc R type 3a2 (X83858), EMR-1 (NM_001974), HTm4 (L35848), fibroblast growth factor R 2 (NM_022969), and low density lipoprotein R (NM_000527); and

comparing the level of expression of each of the one or more non-neutrophil granulocyte- or mast cell-selective markers with a reference level of expression, wherein a statistically significant difference between the level of expression of at least one non-neutrophil granulocyte- or mast cell-selective marker and the reference level of expression for the at least one non-neutrophil granulocyte- or mast cell-selective marker is indicative of the presence of a non-neutrophil granulocyte disorder or mast cell disorder in the subject.

15. (Original) The method of claim 14, wherein the non-neutrophil granulocyte disorder is a basophil disorder.

16. (Original) The method of claim 15, wherein the basophil disorder is a basophil-associated tumor or cancer.

17.- 71. (Canceled)

72. (New) The method of claim 1, wherein the granulocyte disorder is a myeloproliferative disorder.